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  51  GCACTGCCTT TACTTCAGTG GGAATCTCGG CCTCAGCCTG CAAGCCAAGT
 101  GTTCACAGTG AAAAAAGCAA GAGAATAAGC TAATACTCCT GTCCTGAACA
 151  AGGCAGCGGC TCCTTGGTAA AGCTACTCCT TGATCGATCC TTTGCACCGG
 201  ATTGTTCAAA GTGGACCCCA GGGGAGAAGT CGGAGCAAAG AACTTACCAC
 251  CAAGCAGTCC AAGAGGCCCA GAAGCAAACC TGGAGGTGAG ACCCAAAGAA
 301  AGCTGGAACC ATGCTGACTT TGTACACTGT GAGGACACAG AGTCTGTTCC
 351  TGGAAAGCCC AGTGTCAACG CAGATGAGGA AGTCGGAGGT CCCCAAATCT
 401  GCCGTGTATG TGGGGACAAG GCCACTGGCT ATCACTTCAA TGTCATGACA
 451  TGTGAAGGAT GCAAGGGCTT TTTCAGGAGG GCCATGAAAC GCAACGCCCG
 501  GCTGAGGTGC CCCTTCCGGA AGGGCGCCTG CGAGATCACC CGGAAGACCC
 551  GGCGACAGTG CCAGGCCTGC CGCCTGCGCA AGTGCCTGGA GAGCGGCATG
 601  AAGAAGGAGA TGATCATGTC CGACGAGGCC GTGGAGGAGA GGCGGGCCTT
 651  GATCAAGCGG AAGAAAAGTG AACGGACAGG GACTCAGCCA CTGGGAGTGC
 701  AGGGGCTGAC AGAGGAGCAG CGGATGATGA TCAGGGAGCT GATGGACGCT
 751  CAGATGAAAA CCTTTGACAC TACCTTCTCC CATTTCAAGA ATTTCCGGCT
 801  GCCAGGGGTG CTTAGCAGTG GCTGCGAGTT GCCAGAGTCT CTGCAGGCCC
 851  CATCGAGGGA AGAAGCTGCC AAGTGGAGCC AGGTCCGGAA AGATCTGTGC
 901  TCTTTGAAGG TCTCTCTGCA GCTGCGGGGG GAGGATGGCA GTGTCTGGAA
 951  CTACAAACCC CCAGCCGACA GTGGCGGGAA AGAGATCTTC TCCCTGCTGC
1001  CCCACATGGC TGACATGTCA ACCTACATGT TCAAAGGCAT CATCAGCTTT
1051  GCCAAAGTCA TCTCCTACTT CAGGGACTTG CCCATCGAGG ACCAGATCTC
1101  CCTGCTGAAG GGGGCCGCTT TCGAGCTGTG TCAACTGAGA TTCAACACAG
1151  TGTTCAACGC GGAGACTGGA ACCTGGGAGT GTGGCCGGCT GTCCTACTGC
1201  TTGGAAGACA CTGCAGGTGG CTTCCAGCAA CTTCTACTGG AGCCCATGCT
1251  GAAATTCCAC TACATGCTGA AGAAGCTGCA GCTGCATGAG GAGGAGTATG
1301  TGCTGATGCA GGCCATCTCC CTCTTCTCCC CAGACCGCCC AGGTGTGCTG
1351  CAGCACCGCG TGGTGGACCA GCTGCAGGAG CAATTCGCCA TTACTCTGAA
1401  GTCCTACATT GAATGCAATC GGCCCCAGCC TGCTCATAGG TTCTTGTTCC
```

Fig. 1

1451 TGAAGATCAT GGCTATGCTC ACCGAGCTCC GCAGCATCAA TGCTCAGCAC

1501 ACCCAGCGGC TGCTGCGCAT CCAGGACATA CACCCCTTTG CTACGCCCCT

1551 CATGCAGGAG TTGTTCGGCA TCACAGGTAG CTGAGCGGCT GCCCTTGGGT

1601 GACACCTCCG AGAGGCAGCC AGACCCAGAG CCCTCTGAGC CGCCACTCCC

1651 GGGCCAAGAC AGATGGACAC TGCCAAGAGC CGACAATGCC CTGCTGGCCT

1701 GTCTCCCTAG GGAATTCCTG CTATGACAGC TGGCTAGCAT TCCTCAGGAA

1751 GGACATGGGT GCCCCCCACC CCCAGTTCAG TCTGTAGGGA GTGAAGCCAC

1801 AGACTCTTAC GTGGAGAGTG CACTGACCTG TAGGTCAGGA CCATCAGAGA

1851 GGCAAGGTTG CCCTTTCCTT TTAAAAGGCC CTGTGGTCTG GGGAGAAATC

1901 CCTCAGATCC CACTAAAGTG TCAAGGTGTG GAAGGGACCA AGCGACCAAG

1951 GATAGGCCAT CTGGGGTCTA TGCCCACATA CCCACGTTTG TTCGCTTCCT

2001 GAGTCTTTTC ATTGCTACCT CTAATAGTCC TGTCTCCCAC TTCCCACTCG

2051 TTCCCCTCCT CTTCCGAGCT GCTTTGTGGG CTCAAGGCCT GTACTCATCG

2101 GCAGGTGCAT GAGTATCTGT GGGAGTCCTC TAGAGAGATG AGAAGCCAGG

2151 AGGCCTGCAC CAAATGTCAG AAGCTTGGCA TGACCTCATT CCGGCCACAT

2201 CATTCTGTGT CTCTGCATCC ATTTGAACAC ATTATTAAGC ACTGATAATA

2251 GGTAGCCTGC TGTGGGGTAT ACAGCATTGA CTCAGATATA GATCCTGAGC

2301 TCACAGAGTT TATAGTTAAA AAAACAAACA GAAACACAAA CAATTTGGAT

2351 CAAAAGGAGA AAATGATAAG TGACAAAAGC AGCACAAGGA ATTTCCCTGT

2401 GTGGATGCTG AGCTGTGATG GCAGGCACTG GGTACCCAAG TGAAGGTTCC

2451 CGAGGACATG AGTCTGTAGG AGCAAGGGCA CAAACTGCAG CTGTGAGTGC

2501 GTGTGTGTGA TTTGGTGTAG GTAGGTCTGT TTGCCACTTG ATGGGGCCTG

2551 GGTTTGTTCC TGGGGCTGGA ATGCTGGGTA TGCTCTGTGA CAAGGCTACG

2601 CTGACAATCA GTTAAACACA CCGGAGAAGA ACCATTTACA TGCACCTTAT

2651 ATTTCTGTGT ACACATCTAT TCTCAAAGCT AAAGGGTATG AAAGTGCCTG

2701 CCTTGTTTAT AGCCACTTGT GAGTAAAAAT TTTTTTGCAT TTTCACAAAT

2751 TATACTTTAT ATAAGGCATT CCACACCTAA GAACTAGTTT TGGGAAATGT

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2901 AAAAA
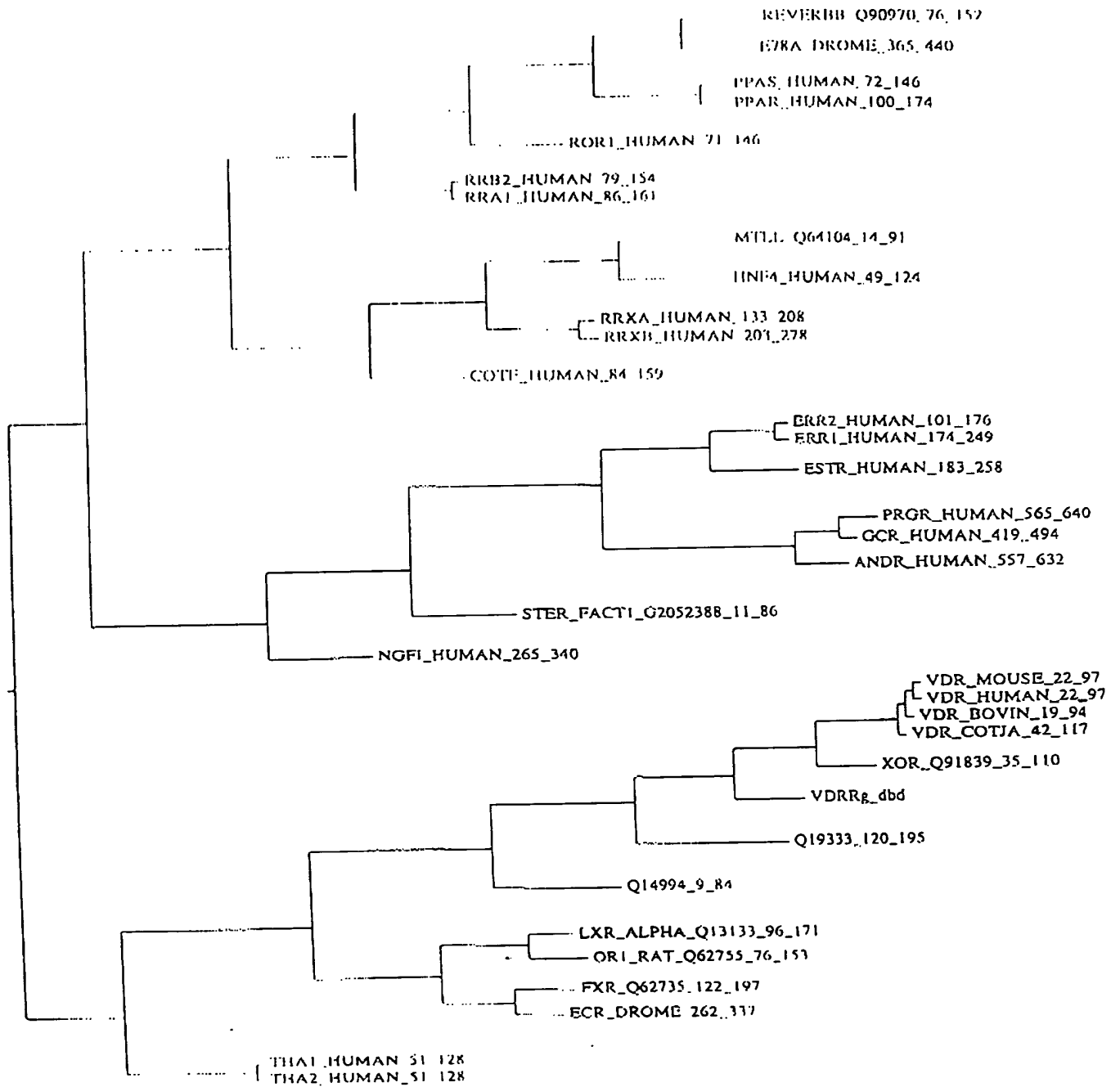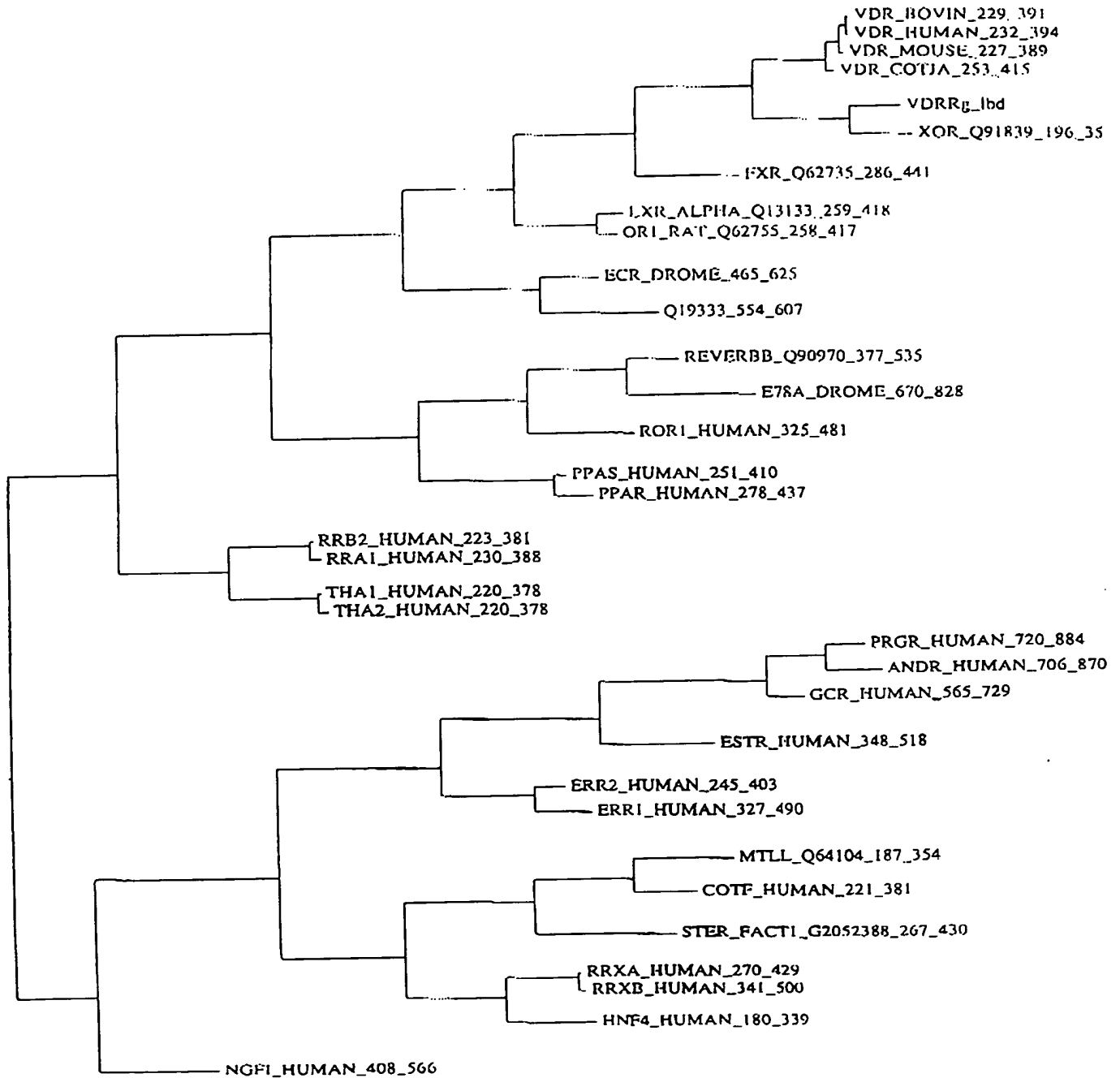
Fig. 1 (cont.)

Evolutionary Neighbour-Joining Tree

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E78A_DROME_365_440

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PPAR_HUMAN_100_174

ROR1_HUMAN_71_146

RRB2_HUMAN_79_154
RRA1_HUMAN_86_161

MTLL_Q64104_14_91

HNF4_HUMAN_49_124

RRXA_HUMAN_133_208
RRXB_HUMAN_203_278

COTF_HUMAN_84_159

ERR2_HUMAN_101_176
ERR1_HUMAN_174_249
ESTR_HUMAN_183_258

PRGR_HUMAN_565_640
GCR_HUMAN_419_494
ANDR_HUMAN_557_632

STER_FACTI_G2052388_11_86

NGFI_HUMAN_265_340

VDR_MOUSE_22_97
VDR_HUMAN_22_97
VDR_BOVIN_19_94
VDR_COTJA_42_117
XOR_Q91839_35_110

VDRRg_dbd

Q19333_120_195

Q14994_9_84

LXR_ALPHA_Q13133_96_171
OR1_RAT_Q62755_76_153

FXR_Q62735_122_197
ECR_DROME_262_337

THA1_HUMAN_51_128
THA2_HUMAN_51_128

Fig. 2

Evolutionary Neighbour-Joining Tree

1 MEVRPKESWN HADFVHCEDT ESVPGKPSVN ADEEVGGPQI CRVCGDKATG

51 YHFNVMTCEG CKGFFRRAMK RNARLRCPFR KGACEITRKT RRQCQACRLR

101 KCLESGMKKE MIMSDEAVEE RRALIKRKKS ERTGTQPLGV QGLTEEQRMM

151 IRELMDAQMK TFDTTFSHFK NFRLPGVLSS GCELPESLQA PSREEAAKWS

201 QVRKDLCSLK VSLQLRGEDG SVWNYKPPAD SGGKEIFSLL PHMADMSTYM

251 FKGIISFAKV ISYFRDLPIE DQISLLKGAA FELCQLRFNT VFNAETGTWE

301 CGRLSYCLED TAGGFQQLLL EPMLKFHYML KKLQLHEEEY VLMQAISLFS

351 PDRPGVLQHR VVDQLQEQFA ITLKSYIECN RPQPAHRFLF LKIMAMLTEL

401 RSINAQHTQR LLRIQDIHPF ATPLMQELFG ITGS

Fig. 4

spleen
thymus
prostate
testis
ovary
small intestine
colon
leukocytes

heart
brain
placenta
lung
liver
skeletal muscle
kidney
pancreas

— 7.5

— 4.4

— 2.4

Fig. 5

Fig. 6

```
TGAATTCGTGGGCCTGCTGGGTTAGTGCTGGCAGCCCCCC 40
TGAGGCCAAGGACAGCAGCATGACAGTCACCAGGACTCAC 80
CACTTCAAGGAGGGGTCCCTCAGAGCACCTGCCATACCCC 120
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AGGCCCAGAAGCAAACCTGGAGGTGAGACCCAAAGAAAGC 200
TGGAACCATGCTGACTTTGTACACTGTGAGGACACAGAGT 240
CTGTTCCTGGAAAGCCCAGTGTCAACGCAGATGAGGAAGT 280
CGGAGGTCCCCAAATCTGCCGTGTATGTGGGGACAAGGCC 320
ACTGGCTATCACTTCAATGTCATGACATGTGAAGGATGCA 360
AGGGCTTTTTCAGGAGGGCCATGAAACGCAACGCCCGGCT 400
GAGGTGCCCCTTCCGGAAGGGCGCCTGCGAGATCACCCGG 440
AAGACCCGGCGACAGTGCCAGGCCTGCCGCCTGCGCAAGT 480
GCCTGGAGAGCGGCATGAAGAAGGAGATGATCATGTCCGA 520
CGAGGCCGTGGAGGAGAGGCGGGCCTTGATCAAGCGGAAG 560
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GGCTGACAGAGGAGCAGCGGATGATGATCAGGGAGCTGAT 640
GGACGCTCAGATGAAAACCTTTGACACTACCTTCTCCCAT 680
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GCGAGTTGCCAGAGTCTCTGCAGGCCCCATCGAGGGAAGA 760
AGCTGCCAAGTGGAGCCAGGTCCGGAAAGATCTGTGCTCT 800
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GCCGGCTGTCCTACTGCTTGGAAGACACTGCAGGTGGCTT 1120
CCAGCAACTTCTACTGGAGCCCATGCTGAAATTCCACTAC 1160
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TGATGCAGGCCATCTCCCTCTTCTCCCCAGACCGCCCAGG 1240
TGTGCTGCAGCACCGCGTGGTGGACCAGCTGCAGGAGCAA 1280
TTCGCCATTACTCTGAAGTCCTACATTGAATGCAATCGGC 1320
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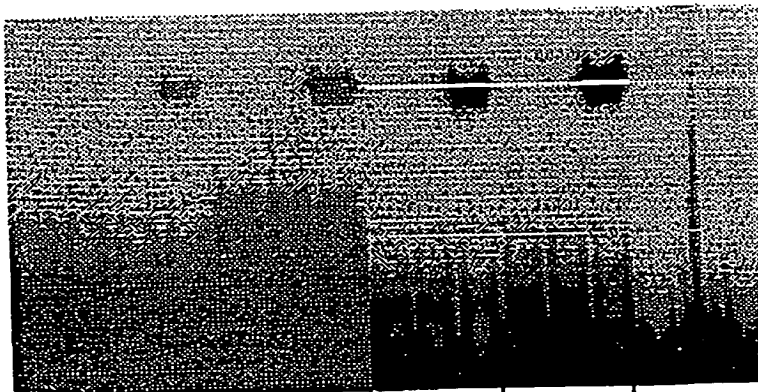
Fig. 7

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AGCGGCTGCCCTTGGGTGACACCTCCGAGAGGCAGCCAGA 1520
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TGGACACTGCCAAGAGCCGACAATGCCCTGCTGGCCTGTC 1600
TCCCTAGGGAATTCCTGCTATGACAGCTGGCTAGCATTCC 1640
TCAGGAAGGACATGGGTGCCCCCCCACCCCCAGTTCAGTCT 1680
GTAGGGAGTGAAGCCACAGACTCTTACGTGGAGAGTGCAC 1720
TGACCTGTAGGTCAGGACCATCAGAGAGGCAAGGTTGCCC 1760
TTTCCTTTTAAAAGGCCCTGTGGTCTGGGGAGAAATCCCT 1800
CAGATCCCACTAAAGTGTCAAGGTGTGGAAGGGACCAAGC 1840
GACCAAGGATAGGCCATCTGGGGTCTATGCCCACATACCC 1880
ACGTTTGTTCGCTTCCTGAGTCTTTTCATTGCTACCTCTA 1920
ATAGTCCTGTCTCCCACTTCCCACTCGTTCCCCTCCTCTT 1960
CCGAGCTGCTTTGTGGGCTCAAGGCCTGTACTCATCGGCA 2000
GGTGCATGAGTATCTGTGGGAGTCCTCTAGAGAGATGAGA 2040
AGCCAGGAGGCCTGCACCAAATGTCAGAAGCTTGGCATGA 2080
CCTCATTCCGGCCACATCATTCTGTGTCTCTCGCATCCATT 2120
TGAACACATTATTAAGCACTGATAATAGGTAGCCTGCTGT 2160
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GGCACTGGGTACCCAAGTGAAGGTTCCCGAGGACATGAGT 2360
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AA 2802
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Fig. 7 (cont.)

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GACEITRKTRRQCQACRLRKCLESGMKKEMIMSDEAVEER  160
RALIKRKKSERTGTQPLGVQGLTEEQRMMIRELMDAQMKT  200
FDTTFSHFKNFRLPGVLSSGCELPESLQAPSREEAAKWSQ  240
VRKDLCSLKVSLQLRGEDGSVWNYKPPADSGGKEIFSLLP  280
HMADMSTYMFKGIISFAKVISYFRDLPIEDQISLLKGAAF  320
ELCQLRFNTVFNAETGTWECGRLSYCLEDTAGGFQQLLLE  360
PMLKFHYMLKKLQLHEEEYVLMQAISLFSPDRPGVLQHRV  400
VDQLQEQFAITLKSYIECNRPQPAHRFLFLKIMAMLTELR  440
SINAQHTQRLLRIQDIHPFATPLMQELFGITGS.  474
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Fig. 8

FREE PROBE

RXR - + - + + - + + - + + - + + - +

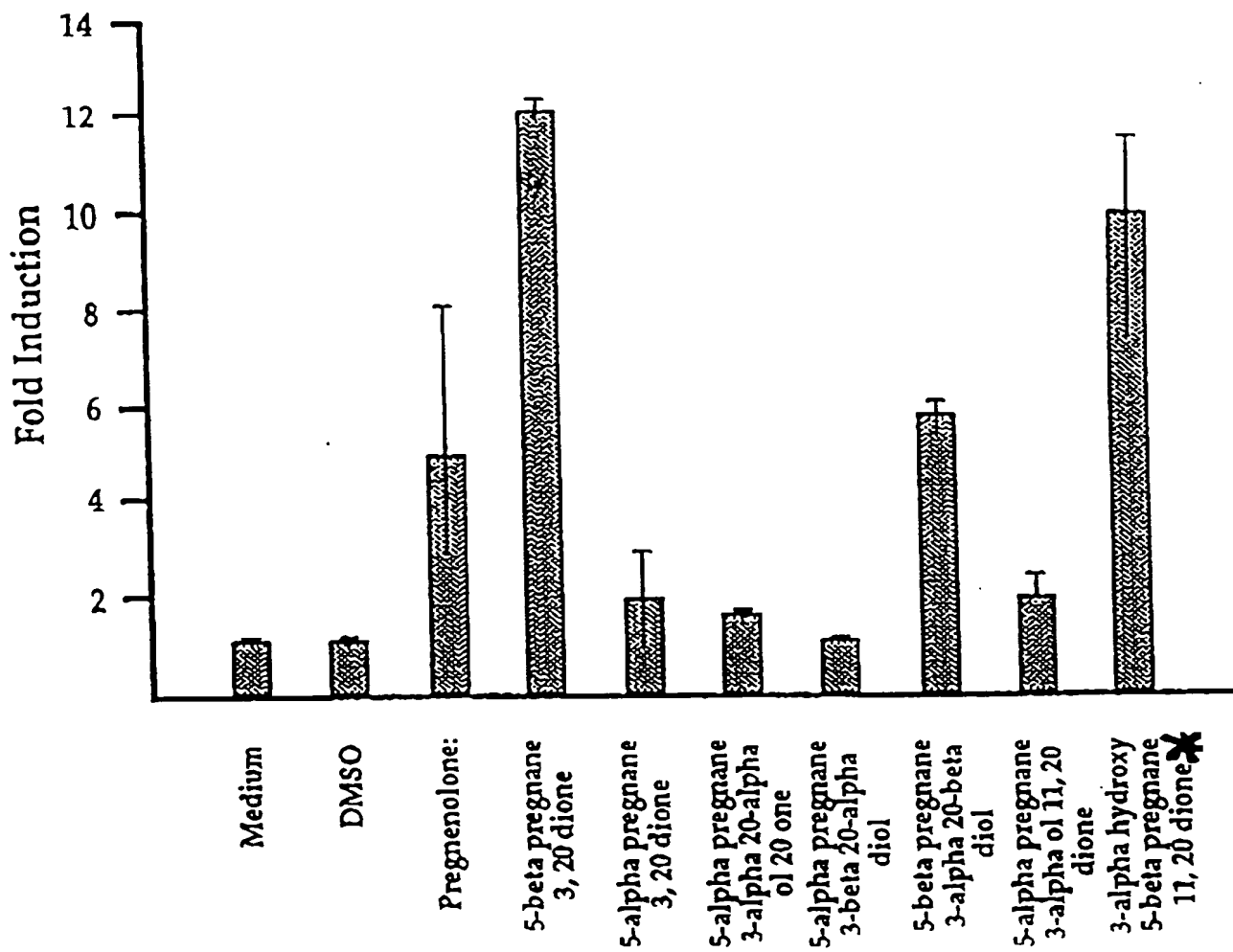VDRR - - + + - + + - + + - + + - + +
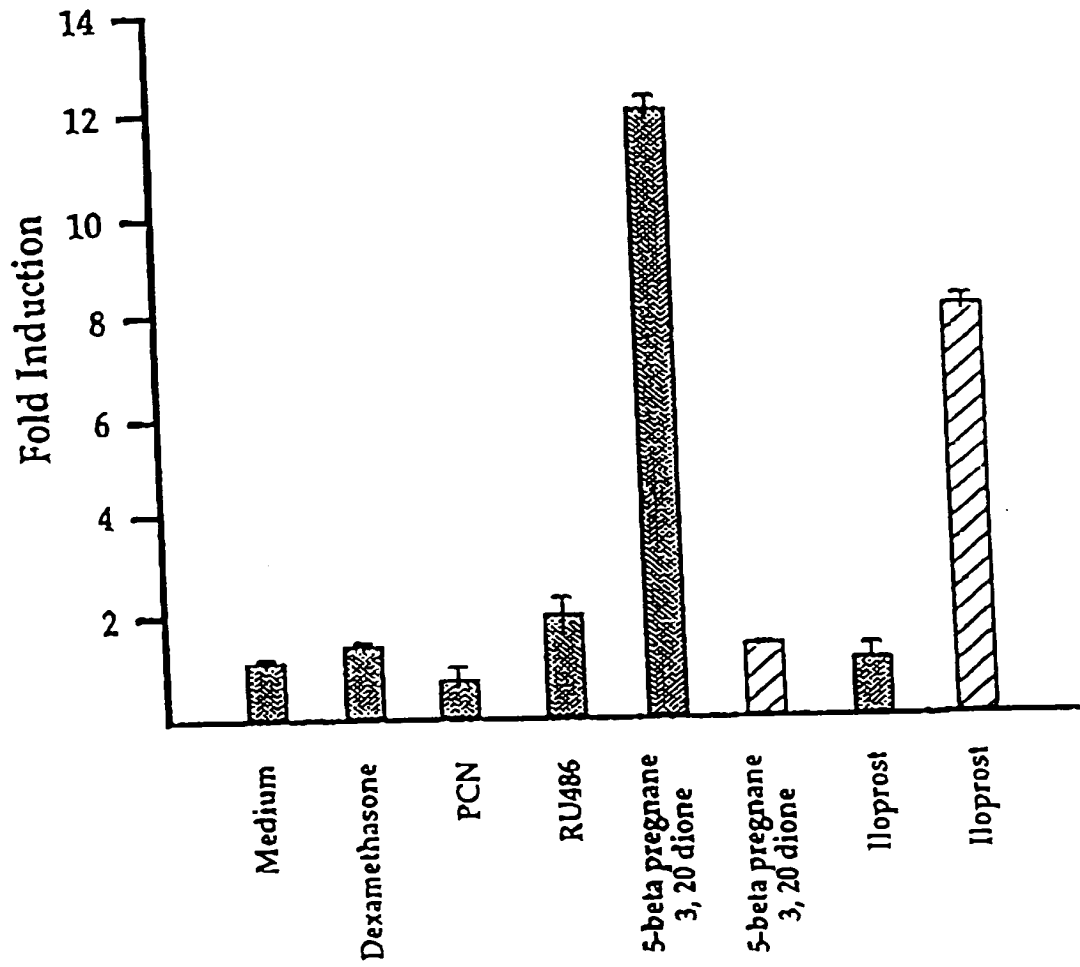
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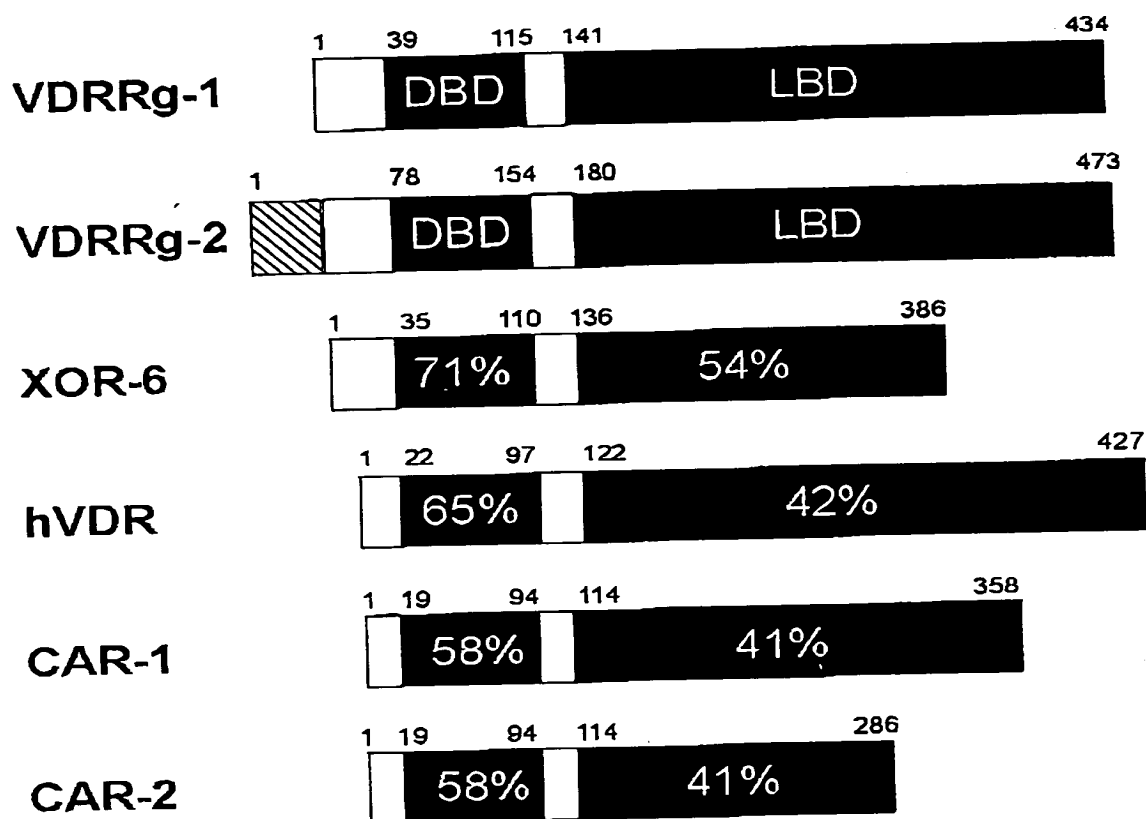
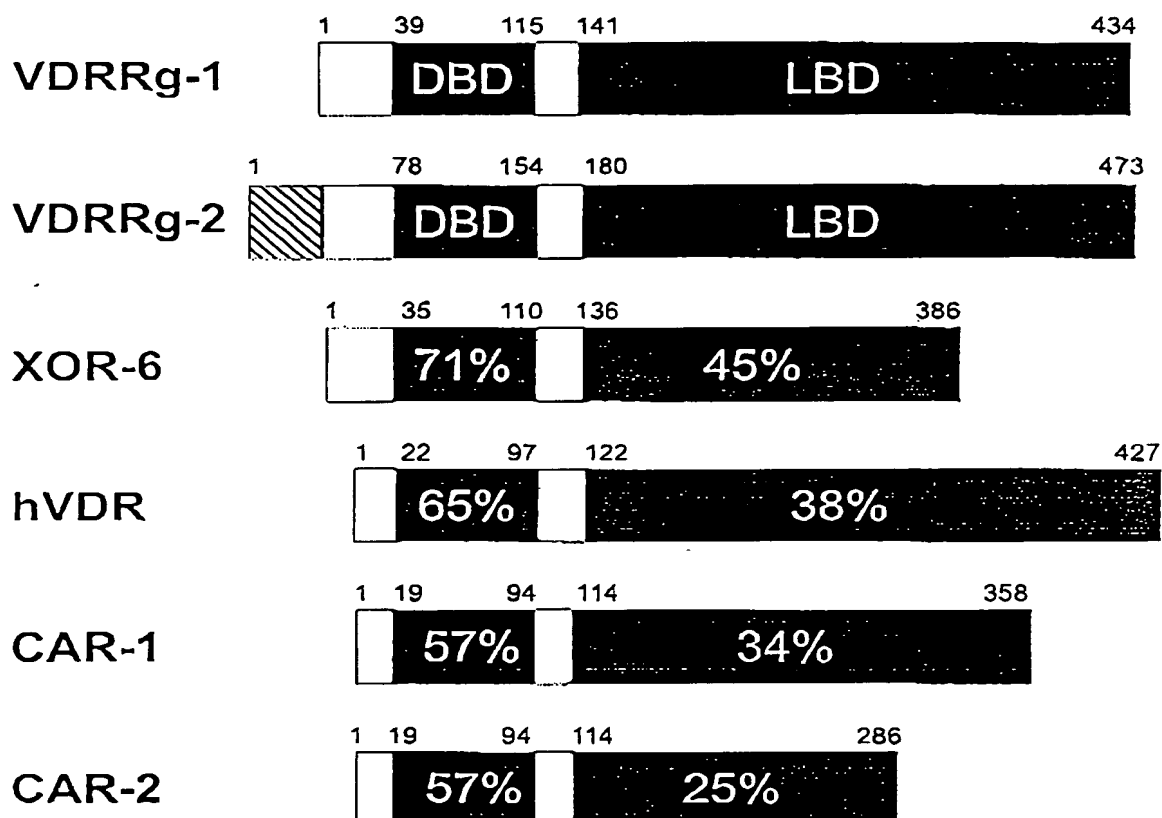Fig. 9

Fig. 10

Fig. 11

Fig. 12

Fig. 13